Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the

application.

Claim 1 (currently amended): A color image pickup device <u>for picking up a color image,</u>

comprising:

a pixel group placed in an array of a plurality of pixels of photoelectric conversion

elements; and

a color coding array corresponding to the pixel group, arranged in a randomized array<u>;</u>

<u>wherein the color coding array arranged in the randomized array directly picks up the color</u>

image.

Claim 2 (original): The color image pickup device according to claim 1, wherein said

color coding array comprises a color filter.

Claim 3 (currently amended): A color image pickup apparatus <u>for picking up a color</u>

<u>image,</u> comprising:

a color image pickup device having a pixel group placed in an array of a plurality of pixels

of photoelectric conversion elements and a color coding array corresponding to the pixel group,

arranged in a randomized array;

the color coding array arranged in the randomized array directly picks up the color image;

and

color separation means for performing color separation processing of output signals of the

color image pickup device in accordance with the random color coding array of the color image

pickup device.

Claim 4 (original): The color image pickup apparatus according to claim 3, wherein said

color coding array comprises a color filter.

Claim 5 (original): The color image pickup apparatus according to claim 3 further

comprising storage means for storing array data concerning the random color coding array of said

color image pickup device, for performing color separation processing at said color separation

means.

Claim 6 (original): The color image pickup apparatus according to claim 5, wherein said

storage means comprises mask ROM.

Claim 7 (original): The color image pickup apparatus according to claim 5, wherein said

storage means comprises EEPROM.

Claim 8 (currently amended): A color image pickup device <u>for picking up a color image,</u> comprising:

a pixel group placed in an array of a plurality of pixels of photoelectric conversion elements; and

a color coding array corresponding to the pixel group, arrayed in a randomized array satisfying predetermined array restricting conditions<u>;</u>

<u>wherein the color coding array arranged in the randomized array directly picks up the color</u> <u>image</u>.

Claim 9 (original): The color image pickup device according to claim 8, wherein said color coding array comprises a color filter.

Claim10 (original): The color image pickup device according to claim 8, wherein said array restricting conditions are minimum density conditions concerning colors.
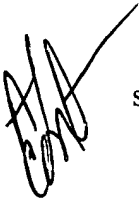
Claim 11 (currently amended): A color image pickup apparatus <u>for picking up a color</u> <u>image,</u> comprising:

a color image pickup device having a pixel group placed in an array of a plurality of pixels of photoelectric conversion elements and a color coding array corresponding to the pixel group, arrayed in a randomized array satisfying predetermined array restricting conditions;

the color coding array arranged in the randomized array directly picks up the color image:

and

color separation means for performing color separation processing of output signals of the

color image pickup device in accordance with the random color coding array of the color image

pickup device.

Claim 12 (original): The color image pickup apparatus according to claim 11, wherein

said color coding array comprises a color filter.

Claim 13 (currently amended): A color image pickup apparatus for picking up a color

image, comprising:

a color image pickup device having a pixel group placed in an array of a plurality of pixels

of photoelectric conversion elements and a color coding array corresponding to the pixel group,

arrayed in a randomized array satisfying minimum density conditions concerning colors;

the color coding array arranged in the randomized array directly picks up the color image:

and

color separation means for performing color separation processing of output signals of the

color image pickup device in accordance with the random color coding array of the color image

pickup device.

Claim 14 (original): The color image pickup apparatus according to claim 13, wherein said color coding array comprises a color filter.

Claim 15 (original): The color image pickup apparatus according to claim 11 further comprising storage means for storing array data concerning the random color coding array of said color image pickup device, for performing color separation processing at said color separation means.

Claim 16 (original): The color image pickup apparatus according to claim 13 further comprising storage means for storing array data concerning the random color coding array of said color image pickup device, for performing color separation processing at said color separation means.

Claim 17 (original): The color image pickup apparatus according to claim 15, wherein said storage means comprises mask ROM.

Claim 18 (original): The color image pickup apparatus according to claim 16, wherein said storage means comprises mask ROM.

Claim 19 (original): The color image pickup apparatus according to claim 15, wherein said storage means comprises EEPROM.

Claim 20 (original): The color image pickup apparatus according to claim 16, wherein said storage means comprises EEPROM.

Claim 21 (currently amended): A color image pickup device for picking up a color image, comprising:

a pixel group placed in an array of a plurality of pixels of photoelectric conversion elements; and

a color coding array corresponding to the pixel group, arrayed in a randomized array satisfying predetermined color distributing conditions;

wherein the color coding array arranged in the randomized array directly picks up the color image.

Claim 22 (original): The color image pickup device according to claim 21, wherein said color coding array comprises a color filter.

Claim 23 (currently amended): A color image pickup apparatus comprising:

a color image pickup device having a pixel group placed in an array of a plurality of pixels of photoelectric conversion elements and a color coding array corresponding to the pixel group, arrayed in a randomized array satisfying predetermined color distributing conditions;

the color coding array arranged in the randomized array directly picks up the color image;

and

color separation means for performing color separation processing of output signals of the

color image pickup device in accordance with the random color coding array of the color image

pickup device.

Claim 24 (original): The color image pickup apparatus according to claim 23, wherein

said color coding array comprises a color filter.

Claim 25 (original): The color image pickup apparatus according to claim 23 further

comprising storage means for storing array data concerning the random color coding array of said

color image pickup device, for performing color separation processing at said color separation

means.

Claim 26 (original): The color image pickup apparatus according to claim 25, wherein

said storage means comprises mask ROM.

Claim 27 (original): The color image pickup apparatus according to claim 25, wherein

said storage means comprises EEPROM.

Claim 28 (currently amended): A color image pickup apparatus for picking up a color

image, comprising:

a color image pickup device having a pixel group placed in an array of a plurality of pixels

of photoelectric conversion elements and a color coding array corresponding to the pixel group,

arranged in a randomized array;

the color coding array arranged in the randomized array directly picks up the color image;

storage means for storing array data concerning the color coding array and pixel defect data

of the color image pickup device; and

color separation means for generating color signals in accordance with the color coding

array data stored in the storage means,

wherein said color separation means performing a predetermined pixel defect correction in

the color signal generating process based on the pixel defect data stored in said storage means.

Claim 29 (original): The color image pickup apparatus according to claim 28, wherein

said color coding array comprises a color filter.

Claim 30 (original): The color image pickup apparatus according to claim 28, wherein the

predetermined pixel defect correction processing by said color separation means comprises

processing where an output signal of a fault pixel is supplemented by using an output signal of the

pixel nearest to the fault pixel among the pixels of the same color as the color of signal to be

supplemented for the fault pixel.

Claim 31 (original): The color image pickup apparatus according to claim 28, wherein

said storage means comprises EEPROM.

Claim 32 (original): The color image pickup apparatus according to claim 30, wherein said storage means comprises EEPROM.

Claim 33 (New): A color image pickup device comprising:

a pixel array having two-dimensionally arranged pixels, for effecting photoelectric conversion of an incident optical image; and

a color separation filter for guiding the incident optical image to each pixel of said pixel array in a manner separated into a plurality of primary colors;

wherein said color separation filter has a random color arrangement satisfying minimum density conditions concerning colors but having no regularity and directly picks up the color image.

Claim 34 (New): A color image pickup system comprising:

a color image pickup device comprising a pixel array having two-dimensionally arranged pixels for effecting photoelectric conversion of an incident optical image and a color separation filter for guiding the incident optical image to each pixel of said pixel array in a manner separated into a plurality of primary colors, said color separation filter having a random color arrangement satisfying minimum density conditions concerning colors but without regularity and directly picking up the color image;

a preprocess circuit for at least converting output of said color image pickup device into digital signals;

a memory device for storing color restoration data corresponding to the color

arrangement of said color separation filter; and

a digital processing circuit for generating digital image signals restored to predetermined

color space, based on the digital signals outputted from said preprocess circuit and the color

restoration data stored at said memory device.